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ABSTRACT

Aspects of the lecture that make it come across well, requirements for learning in the classroom, and selected findings from an instructor-designed questionnaire that includes student evaluations of instruction are discussed. Lecturing teachers need to talk with credibility and enthusiasm and to prepare the substance of the presentation, the sequence of points, and their integration with other lectures. A good teacher in the lecture setting will be guided by at least three basic requirements for learning in the classroom: motivation, understanding, and remembering. Lectures that pose problems and actively involve students in their solutions are more likely to maintain and increase motivation than lectures that present neatly encapsulated principles and facts. Organizing the lecture, providing evidence for points, and critically testing an idea promote understanding by the student. The way the lecture is organized affects student retention of material, and the student must mentally organize the material that he receives. Questionnaire results provide some data on the lecture and its comparison with other teaching methods. A chapter in a book on teaching that provides advice about lecturing is cited. (SW)

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THE LECTURE

Most of us lecture most of the time and we tend to get set in our ways. Lecturing has become a security blanket without which we would neither feel like teachers nor be recognized by our students as such. A six-page analysis will not likely, therefore, change the course of lecturing events. Even so, there is room to improve our teaching, and this report is, in effect, a discourse on good teaching.

We did an earlier *Memo* (#30, August 1968) on this topic, but then, as now, we were hard pressed as to what might be said to the U-M faculty about lecturing. A few general observations can be made, but the impact of a lecture depends primarily on conditions that are quite specific to a particular class—the unique style and personality of the teacher, the nature of course content, and the backgrounds and interests of the students.

The lecture, which took its name from the religious teachers of the Middle Ages, the *lektors*, became the chief form of instruction because these teachers were, in fact, the main formal source of new information for students. The invention of the printing press and, more recently, the development of media, computers, and individualized instruction have reduced dependence on the lecture in the current educational scene—but only slightly. For one thing, it is cost effective: increasing the size of a lecture class is, for example, a convenient way to improve the "productivity" of the teaching faculty. Teachers know that there are other good and sufficient reasons for the resiliency and the popularity of the lecture method. The live teacher can be an inspirational force for students, a source of new information, and can provide a perspective view of a topic. Sometimes the lecture is the single most effective method for arousing interest, initiating action, and challenging the preformed sets of attitudes and values held by students. Poor lecturing performance does deserve a bad press, but the value of this method of teaching, when done well, has been confirmed from Aristotle to the present. It can have long-lasting effects on how students think about things.

STYLE AND SUBSTANCE

Boredom is the enemy of the lecture method. (Other methods of teaching can also be boring—but with a less visible teacher to blame.) Teachers know this, and as a consequence, too many try to entertain their students. Some are successful. A more appropriate alternative is to challenge students, and to do this in one's role as a subject-matter specialist. Students appreciate this; they want to know what their teachers believe and how they arrive at these beliefs. Discussing personal and social values and the values embraced within a discipline not only enhances a teacher's credibility, it can also make lectures more compelling. Most of the teachers on this campus present an excellent blend of style with substance; they communicate well via the spoken word. This section will briefly note the major factors over which the teacher has some control and which make a difference in how well a lecture is received.

Memo to the Faculty

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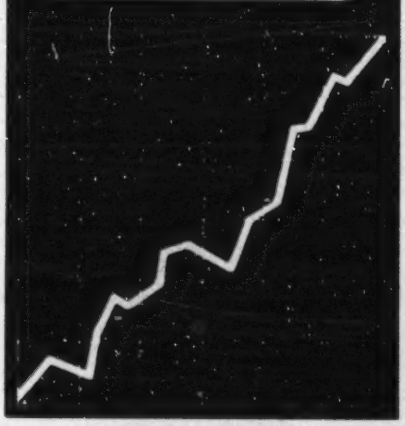

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Talking with Credibility

The lecturing teacher must be articulate, be able to make a point verbally. Speaking with pear-shaped vowels and projecting one's voice to the back of the room will not, in themselves, promote learning—but are better than mumbling. The research analysis of student ratings shows that central weight is given to how well the teacher talks. This is the strongest common denominator influencing how students respond to most of the specific items in a rating scale.

In 1973 an article appeared in the *Journal of Medical Education* which made interesting pedagogical news. An actor, "Dr. Fox," was introduced to a class as a visiting specialist on the biochemistry of memory. His lecture, however, contained little substance and made considerable use of double talk, neologisms, non sequiturs, and contradictory statements. His presentation included parenthetical humor, and emotional phrases and gestures, but also meaningless references to unrelated topics. This "seductive" lecture received favorable ratings by students on an eight-item questionnaire.

Follow-up studies have refined the analysis of the "Dr. Fox effect" and show that both style and substance make a difference. To me the important generalization for those of us who lecture is to recognize that enthusiasm (seduction?) is important, but equally significant is the fact that students come to class with the expectation of learning something; they trust their teachers who are, presumably, credible sources of valid information. We may bluff on occasion, but if we lose our credibility, our usefulness as teachers is largely destroyed.

Enthusiasm

A lecturer with style and flair—and with an honest enthusiasm for the subject—may well be able to inspire students to learn and to consider further work in the field. One guiding principle for giving a good lecture, therefore, is simply to talk with enthusiasm. The public image of a master teacher incorporates this motivational and inspirational quality: the ability of the teacher to generate interest, to excite, and to challenge. Showmanship and classroom entertainment will not do it. Most U-M students will see through and reject a contrived attempt at happiness-through-learning.

The eyes of the talking teacher are on the class, but his mind is on the content and organization of the lecture while his heart is defending his ego. A good lecture displays an appropriate balance among these three components: self, subject-matter, and students. If you are interested in hearing and seeing yourself as your students do, call the Center (Gary Sigman, 4-0505) and we will arrange to put you on camera and record segments of a lecture presentation. This instant replay technique is called microteaching and is rather widely used. You should be cautioned that it is usually quite disturbing to observe one's unrealized habits of hand waving, eye fixations, speaking pattern, gross bodily movements, and the like. We offer two points of comfort: 1) such mannerisms are more shocking to you than they are to the observing students who become accustomed to these things, and 2) in most instances these stylistic factors are not particularly significant in determining the long-term impact of a teacher on the class. Students have strong adaptive powers and are able to screen out the speaker-as-a-medium and respond more directly to the substance of what is being talked about. Students are more responsive to the spontaneity and the serendipity that occur when a teacher is deeply engrossed and concentrating intently on the intellectual organization of a complex body of knowledge.

Artificiality, role playing, and contrived efforts to impress students cannot be sustained three hours a week throughout the semester. A certain patronizing quality in such exhibitions very quickly counters the authentic expression of those values a teacher has derived from the substance of a given course of study—in many ways, the most enduring carryover from a classroom lecture.

Preparation

A good lecture requires considerable preparation, not so much practicing and rehearsing one's style of presentation, but marking out the substance of the talk, the sequence of points, and their integration with the lectures that preceded and those that follow. The balance between style and substance is well summarized by Professor Eble in the box on p. 3.

When Galileo said, "You cannot teach a man anything; you can only help him to find it within himself," he meant that the educational world does not revolve about the teacher; it is centered on the student. Good teachers (lecturers), therefore, are defined by their success in setting up good conditions for learning by students.

THE VIEW FROM THE OTHER SIDE OF THE PODIUM—THE STUDENT

The large lecture course is a handy target for critics of large universities. Research findings, however, do not back up the charge that large classes, *per se*, are bad. Finer discrimination is needed, especially concerning the competence of the teacher. A good teacher in the lecture setting will be guided by at least three basic requirements for learning in the classroom: motivation, understanding, and remembering.

Motivation

Speculation about the mainsprings of human action is as old as folklore, philosophy, and literature. Regardless of our personal theories about the relation between motivation and learning, we must accept the pragmatic rule that motivation is a prerequisite for efficient learning. A perceptive teacher will make adjustments for the differences in student interests, aims, and ambitions, just as he would for differences in intellectual ability and academic background.

Despite the leveling effects of mass education, students remain curious

and continue to explore new ideas. Studies on college learning indicate that when lectures are arranged around questions which pique students' interest, rather than around mere citations of fact, not only is learning improved, but interest in further learning about a topic is increased. Lectures which pose problems and actively involve students in the solutions are more likely to maintain and increase motivation than lectures which present neatly encapsulated principles and facts. The intrinsic satisfaction of discovery, understanding, and achieving personal meaning provides the principle motivation for learning in a well-taught course of study.

Some members of the faculty view as a sign of weakness the acquiescence of a teacher to the interests and aims of students. This defensive position misstates the instructional problem. The teacher is part of the motivational picture whether he likes it or not. Effective learning in the classroom—lecture course or otherwise—depends on the teacher's ability to transform resistance to support and to maintain the interest that brought students to his course in the first place. "If the substance of the course is worthwhile, well planned, and if the teacher evidences an honest enthusiasm for the subject and a genuine interest in the students, the problem of motivating students will almost take care of itself. Well-organized subject matter leading to well-defined objectives and with constructive feedback along the way does more to counter apathy, indifference, or negativism than do efforts to attack motivation directly.

. . . . . .

A teacher's crutch-like dependency on extrinsic lures and threats, e.g., grades, for motivating learning ignores the intellectual curiosity of students and their desire to understand. Conceptual ordering can be exciting and is most likely to become so when a student is free to seek information that will reduce his own uncertainties. If learning in a course has been intrinsically satisfying, if inquiry has been fostered, it is likely that questioning and searching will continue beyond the day of graduation. The ability to start this learning-chain reaction is one of the defining characteristics of a good teacher." (Ericksen, 1974, pp. 78–79)

Understanding

Beyond motivation, how can a lecture maintain the more significant factors for learning? Presumably, the lecturer wants students to understand what she is talking about. The first step, obviously, is to mark out the boundaries of the topic, to define the concept, or to describe quite accurately the process being "covered" in a particular segment of the lecture. How the lecturer goes about this will, of course, be different in a history course, a physics course, a sociology course, a mathematics course, and the like. The second step is to provide the evidence which supports the point being made. This evidence may derive from research, from scholarly efforts, or from the logical process on the part of the teacher. The third step is also critical: providing examples that confirm (or deny) the validity of the basic topic. Ideally, some of these examples should be supplied by the student as a test of her ability to apply a larger concept, process, or point of view to a specific event, situation, or observation.

Obviously, it is impossible for any lecturer to control the direction of intellectual attention on the part of each student throughout a 50-minute presentation. It is important, therefore, that the teacher recognize and accommodate to the inevitable mind wanderings, the confusion, and the gaps that occur as the students move in and out of rapt attention to the talker. Students cannot process in-

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THE LECTURE AS DISCOURSE

Kenneth E. Eble's *The Craft of Teaching* is worth your reading—loan copies are available at CRLT. The author is Professor of English at the University of Utah, and his analysis is not obscured by jargon or a misplaced emphasis on technological arrangements and instructional "strategies." He is sensitive to what is best for students, but his message is directed at teachers, qua teachers. Chapter 5, "The Lecture as Discourse," closes with the following undisguised advice about "how-to."

First, fit the material to the time at your disposal. Restrict your aim to less than a handful of primary topics and consider specific ways of engaging the audience in each one. Do not elaborate overly much nor introduce important matters that leave the audience grasping for particulars. Conduct your scholarly arguments and pursue your peculiar obsessions in places other than the lecture.

Second, seek hard and unrelentingly for precise examples and illustrations and for ways of breaking up a single presentational mode. Take advantage of physical presence and movement, and employ the blackboard and other such devices.

Third, begin by stimulating the interest of the audience. Alluding to the personal or to the world outside, arousing curiosity, providing surprise, and using casual humor are some of the ways of enhancing beginnings. What might work for an opening day of class may not work the day after a tough exam. Sensitivity to the mood of the class and a variety of ways of responding to that mood increase the chance of involving an audience day after day.

Fourth, in following the sketch that comes from advance preparation, develop an ability to improvise and to sustain an improvisational quality even in a carefully structured presentation.

Fifth, provide the audience with frequent breathing spaces and opportunities for questions. Better to talk too little and stop short than go on too long.

Sixth, provide an ending for every lecture but maintain a continuity with what has gone before and what lies ahead.

Seventh, develop and use a range of voice, gestures, and physical movement that is appropriate to your style, to the material, and to the occasion and that reinforces content, fixes attention, and stimulates an audience. Listen to yourself and root out mannerisms and affectations.

Eighth, be guided by the living audience and the most pressing need of striking up discourse with as many as possible. You are both host and guest.

formation they hear with the same efficiency as when reading. The lecture denies self-pacing. It cannot allow, as reading does, the dance of the eyes across the page to recover, examine, or confirm a questionable assertion or an uncertain point. It prohibits the scrutinizing and mulling over that make reading more active and analytic than listening. When reading, the student moves forward at her own rate as she leafs back and forth through the pages, moves in and out of the book to other reference materials, tests herself, speculates and wonders, and leaves the book to converse with her fellow students and to range widely across discipline boundaries. The point is, *the student is in control;* she determines the sequence of information and the rate and frequency with which it is reviewed and evaluated.

It is unlikely that students will understand topic B if they are still trying to grasp the meaning of topic A. It is important, therefore, that students have an opportunity to "catch up" with the speaker. Repetition, redundancy, and even silence may serve this purpose. The use of frequent examples, anecdotes, and personal speculations may stimulate similar kinds of "bridging" on the part of the students. If the substantive information is presented too fast, the students have difficulty organizing in their heads or in their notes a personal scheme for "chunking" this information into meaningful units. On the other hand, if the lecturer controls the organizing and classifying process, the responsibility of the student to learn and understand is reduced. The student must develop his own framework for mastering an idea. Research has clearly shown that students learn better when they actively participate in the instructional process than when asked to passively accept the conclusions of a distant speaker.

Whether studying alone, in a small group, or sitting in a lecture class, each student seeks confirmation that he is learning the right answers to questions. This feedback principle is important in all forms of learning. For the most part, the student himself decides that he does or does not understand a problem, a paragraph, a page, or a particular part of a lecture. The personal feeling of understanding is a powerful form of reinforcement. In nonlecture forms of instruction—the discussion group, tutoring, laboratory exercises—and in the studio or the clinic, the student has more opportunity to ask questions and to seek confirmation from a teacher.

Even so, the lecture class provides a great deal of feedback. Students electing a given lecture course have certain interests in common. They perceive the lecture as both an organized statement of knowledge and a social event in which a teacher joins in discourse with students and in which students respond to the group as a whole. Reactions that ripple through the class are perceived as indicating some degree of acceptance or rejection of a given point being made by the teacher. Students are sensitive to reactions by their peers, and this form of social support is a significant factor in acquiring new meanings and in reshaping one's attitudes and values.

Examinations are often justified as a feedback mechanism, but, unfortunately, information about specific answers to questions comes too late to make much difference in the here-and-now learning progress of the student. Test scores and course grades are more important as motivating factors than as devices to aid learning and understanding.

Remembering

Two earlier *Memos* dealt with Memory (#33) and Transfer of Learning (#34), and here it will simply be stated that facts, concepts, principles, and procedures that mean something to the student, that he or she understands, will more likely be remembered and used later on. This is obvious. Long-term retention and retrieval are the payoff for the kind of teaching that helps students understand. Research studies indicate that well-organized lectures promote retention and help to develop in students the ability to apply concepts and to generalize from specific examples. The way the lecture is sequenced makes a difference. Experiments in the laboratory and similar studies in the classroom show, for example, that students are more likely to recall what they hear at the beginning and end of a lecture than what they hear in the middle.

U-M Professor George Katona's classic studies of college student learning (1940) emphasize the importance of organization in learning and retention; they also show how necessary it is for the *learner* to be able to organize the material he receives. The problem is complicated by the fact that meaning is personal, private, and subjective. As a student listens to a lecture, he gives meaning to the words within the context of what he has already learned in class or elsewhere. Since this background of experience differs from one student to the next, the actual meanings that are acquired will inevitably carry an idiosyncratic quality. In effect, therefore, the student is more or less on his own as he encodes (labels and incorporates) the lecture information into his own mind. This personal process of intellectual reorganization is the means by which knowledge becomes meaningful and thus accessible later on in a problem-solving setting.

The student, therefore, is by no means a passive vessel being filled with knowledge. If students are atten-

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Faculty Workshop on the Lecture

Early in the Fall term, 1978, CRLT will sponsor a workshop on specific problems and procedures relating to classroom lecturing. Please call Beverly Smith, 3-2367, if you would like to attend. You might also indicate the aspect of lecturing to which you would like to give special attention.

tive and if they are trying to learn, they are intellectually active as they filter and classify information, associate ideas, test themselves, speculate, and assign personal labels to the knowledge they are placing in store. The mystery of how all this is accomplished can only be accepted as teachers get on with the task of "covering the field." A display of authentic enthusiasm on the part of the teacher for the content of the lecture has an underlining effect and thus guides the intellectual ordering of information by the individual student—a process which is absolutely prerequisite if a lecture is to have an enduring impact.

An easy way to arouse students to the need to remember is simply to warn that the material in today's lecture will be included in a future exam. Unfortunately, listening and note taking with the aim of answering questions on the next exam generate a somewhat different cognitive process than listening for comprehension and the reorganization of one's own intellectual repertoire for purposes of long-term retention.

LECTURE METHOD VERSUS...

I don't believe there is a stable, research-based answer to the question: how to give a good lecture? This question is altogether too broad and does not take into account the overriding factors of: the personality of the teacher, the level and complexity of the content area, and the characteristics of the students.

Most research is aimed at comparing the impact of the lecture method with other methods of instruction. My colleagues at the Center, James A. Kulik and Chen-Lin C. Kulik, have recently completed an evaluative survey of current research on "College Teaching" as a chapter in a forthcoming book, *Conceptions of Teaching*. The following excerpts briefly summarize some of their findings (but without citing their careful analysis of the research literature). My selections give particular attention to

Early Returns from the Campus Use of the Instructor-Designed Questionnaire (IDQ)

In the Fall term, 1977, more than 700 different classes (and sections) used IDQ. In February, 1978, Dr. James Kulik gave the teachers of these classes a summary report of some of the overall findings—they had already received their individual results. The responses from a given class are distributed only to the original source of the request. Five "core" items are mandatory, but up to 25 additional questions are selected by the instructor from a catalog of 148 items. The rationale and details of IDQ are given in *Memo* #58. The U-M faculty as a whole might be interested in how this experimental enterprise is working out.

On a scale running from 5 ("strongly agree") to 1 ("strongly disagree"), typical classes received the following median scores:

–Overall, this is an excellent course.	3.89
–Overall, the instructor is an excellent teacher.	4.10

Which questions do instructors most frequently include on their course evaluation forms?

–The instructor appears to have a thorough knowledge of the subject of the course.	77%*
–The instructor gives clear explanations.	74%
–The instructor seems well prepared for each class.	71%
–I gained a good understanding of concepts and principles in this field.	69%
–The instructor puts across material in an interesting way.	59%
–The instructor is willing to meet with and help students outside class.	56%
–The instructor is enthusiastic.	54%
–The instructor is sensitive to student difficulties in handling course material.	54%

***Percentage of questionnaire forms including this item.**

Only one of these "popular" items was selected from the Student Development category, viz.: "I gained . . ." All the others start with "The instructor . . ."

Are there aspects of teaching to which students usually respond favorably? The following items had the highest degree of endorsement—the class median values are shown.

–The instructor is friendly.	4.80
–The instructor seems to enjoy teaching.	4.76
–The instructor appears to have a thorough knowledge of the course.	4.68
–The instructor seems knowledgeable in many areas.	4.52
–The instructor is enthusiastic.	4.52
–The instructor maintains an atmosphere of good feeling in the class.	4.49
–Students in this course are free to disagree and ask questions.	4.48
–The instructor gives individual attention to students in this course.	4.43

Those items which received the highest endorsement tend to focus on the instructor; they are also items which were chosen by many instructors for inclusion in their questionnaires.

At the other extreme, the following items received relatively low ratings.

–Videotapes are a valuable part of this course.	2.64
–My TA plans class activities in detail.	2.84
–I developed plans to take additional related courses.	2.96
–The laboratory was a valuable part of this course.	3.02
–Reading assignments are interesting and stimulating.	3.50
–The textbook makes a valuable contribution to the course.	3.50
–I feel that I am performing up to my potential in this course.	3.55
–I gained a better understanding of myself through this course.	3.58

These items focus less on "the instructor . . ." than on student change or on course elements.

As IDQ becomes more widely used, the above findings will probably change somewhat. Even so, these results show a rather high degree of student satisfaction with teaching on this campus. Teachers in the bottom quartile on core items or specifically selected questions should seek assistance to improve their teaching.

results pertaining to the lecture and its comparisons with other methods of teaching.

Summary of Alternatives to the Lecture Method

Many researchers have compared student performance in college courses taught by lectures and by discussion, and reviewers agree on some basic conclusions. First, they point out that college teaching by discussion is no more nor less effective than teaching by lecture when the criterion of effectiveness is learning factual information. Second, reviewers agree that teaching by discussion is more effective than teaching by lecture for more ambitious cognitive objectives, such as developing problem-solving ability. Reviewers do not agree completely about the effectiveness of discussions in changing attitudes, and they are divided in their reports about student satisfaction in lecture and discussion classes.

Fifty years of research have produced an enormous number of studies of alternatives to the lecture. And yet in terms of outcomes, they seem remarkably similar. In the sixties, a number of college teachers changed their focus from the presentation of classroom instruction to the development of techniques for influencing how, when, how much, and what students studied on their own time. By shifting their attention from group to individual aspects of teaching, these educators hoped to make college teaching more effective.

The Kuliks then summarized major findings under "individualized instruction" and closed the chapter with an excellent analysis of "the components of effective college teaching." The authors are particularly interested in individualized instruction, and for good reason. Their survey of the research findings shows that individualized instruction takes advantage of the more powerful conditions for learning. Research indicates that in both conventional and individualized college courses, frequent quizzing, immediate feedback, and remediation requirements have consistently led to increased effectiveness. (Preprints of this chapter are available on request to CRLT 4-0505.)

References

Eble, K. E. *The Craft of Teaching*. San Francisco: Jossey-Bass, Inc., 1976.

Ericksen, S. C. *Motivation for Learning: A Guide for the Teacher of the Young Adult*. Ann Arbor, MI: The University of Michigan Press, 1974.

Katona, G. *Organizing and Memorizing*. New York: Columbia University Press, 1940.

Kulik, J. A., & Kulik, C.-L. "College Teaching." In P. Peterson & H. J. Walberg (Eds.), *Conceptions of Teaching*. McCutchan Publishing Corporation, in press.

Naftulin, D. H., Ware, J. E., & Donnelly, F. A. The Doctor Fox lecture: A paradigm of educational seduction. *Journal of Medical Education*, 1973, *48*, 630-635. (the original article)

Williams, R. G., & Ware, J. E. An extended visit with Dr. Fox: Validity of student satisfaction with instruction ratings after repeated exposures to a lecturer. *American Educational Research Journal*, 1977, *14*, 449-457. (the latest report)

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